



First Aero Weekly in the World.

Founder and Editor: STANLEY SPOONER.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

OFFICIAL ORGAN OF THE ROYAL AERO CLUB OF THE UNITED KINGDOM.

No. 225. (No. 16, Vol. V.)

APRIL 19, 1913.

[Registered at the G.P.O.] [Weekly, Price 3d.
as a Newspaper. Post Free, 3½d.]

Flight.

Editorial Office: 44, ST. MARTIN'S LANE, LONDON, W.C.

Telegrams: Truditur, Westrand, London. Telephone: Gerrard 1828.

Annual Subscription Rates, Post Free.

United Kingdom ... 15s. od. Abroad ... 20s. od.

CONTENTS.

	PAGE
Editorial Comment:	
The Mansion House Meeting ...	425
Waterplanes at Monaco ..	426
Men of Moment in the World of Flight: Mr. E. C. Gordon England ...	427
Chevillard's Chute de Côté ...	428
The Nieuport Hydro-Aeroplane (with scale drawings) ...	430
Water Flight at Monaco ...	432
Questions in Parliament ...	439
From the British Flying Grounds ...	440
Flying at Hendon ...	443
Royal Flying Corps ...	444
British Notes of the Week ...	445
Foreign Aviation News ...	446
Models. Edited by V. E. Johnson, M.A. ...	448
The Monaco Meeting ...	450
The "South-Eastern" Trophy for Models ...	450

EDITORIAL COMMENT.

The Mansion House Meeting.

WE look forward with the greatest possible hope and interest to the meeting convened by the Aerial Defence Committee of the Navy League, which is to take place at the Mansion House on May 5th, at half past three in the afternoon. A Mansion House meeting is an assembly of more than ordinary consequence, and the auspices under which this particular meeting is to take place, augurs well for a successful issue to its objective. Not only has the Lord Mayor of London given his sanction to the meeting, which is, of course, necessary in respect to any Mansion House meeting, but he has consented to take the chair, and the resolution that will be put before the meeting is one of his own choosing. It is to the effect that if the Government will do their duty in respect to the aerial defence of this country, the citizens of London are prepared to pay their share of the cost. This is a very important resolution to put before the City of London; but, if we may say so, it is the one resolution of any consequence in this matter, and it shows that the Lord Mayor has very clearly and very fully grasped the significant point in the present situation.

As we have often had occasion to explain in these

columns, it is the people who pay for Government aeronautics; and unless the public is encouraged to take an interest in the movement and to understand the importance of aerial armament, it is not logical to suppose that it will be particularly enthusiastic over increased expenditure on an entirely new line of defence.

Of late, the Press of the country has worked consistently and well towards the moulding of public opinion in favour of national aeronautics, and at a crucial point in the proceedings the Council of the Navy League decided to throw the weight of its influence and organisation into the scale in favour of the more rapid progress in the aerial armament of Britain. That was a particularly momentous decision, because the Navy League is one of the most powerful institutions and has already at its command a far-reaching organisation which is invaluable in propaganda work of the kind that is now particularly required to establish once and for all in this country the recognition of the fact that the aeroplane and the airship are no longer toys.

We are, in general, antagonistic to the multiplication of societies having in the main a common object, but we must say that we welcome whole-heartedly the Aerial Defence Committee of the Navy League. It has not been exactly within the province of the Royal Aero Club, nor of the Aeronautical Society to institute propaganda on the subject of national aeronautic defence. The society in whose province that work properly lay is the Aerial League, but this body does not possess the means properly to give effect to such a strenuous and wide spread campaign as is now necessary to produce effective results. The Aerial League, in common with every other society purely aeronautic in character, depends for its existence upon the support of a few enthusiasts, and is, by those very limitations, deprived of the ability to work on a sufficiently large scale. The mere fact of a society like the Navy League, in which so many thousands of people are already interested, and to which they already lend their support, having declared its own interest in aeronautics, must be an immense influence on public opinion.

It must be borne in mind that the Navy League is a non-party organisation, and that this Mansion House meeting is essentially a non-party affair. Every effort will be made to obtain the support of prominent men on both sides of the House. In all parties there are clear thinkers who recognise that national defence stands above politics and who have come of late to believe very sincerely that an adequate development of aerial

armament constitutes an essential item in any national defence programme.

If the Lord Mayor's resolution is passed at this meeting, as we have not the least shadow of doubt it will be, the vote will, in effect, be a mandate from the City of London to the Government at Westminster to proceed without delay and at all costs in establishing the aerial supremacy of Britain. It is a mandate that, we trust, will be repeated at similarly convened meetings in the provinces, for having once aroused public interest in this matter it would be well to ensure that the voice of the people is clearly and unmistakably expressed on the point at issue.

What is needed in England at the present time is that someone in authority should say "Go!" It is not clearly recognised as yet that we must spend money very liberally on what is tantamount to experiment. Particularly is this true in the case of developing hydro-aeroplanes, which are essential to the British Navy. As those who read our account of the Monaco meeting in this week's issue will be aware, the hydro-aeroplane is at present in an utterly undeveloped state. England is thus presented with a unique opportunity of starting level in the contest for the evolution of a satisfactory waterplane. It is of more consequence to Britain than to any other country to develop that class of machine, and the nation should thoroughly realise the significance of the present situation.

We feel assured that success awaits whosoever is determined to succeed in this matter, but we are equally convinced that success is not to be attained save by the liberal expenditure of money. The problem of the waterplane is a really difficult one, that can only be solved by full scale research, involving the wrecking of many a craft. We look upon this feature of the development with a comparatively light heart, because we trust and believe that it may be effected with a minimum risk to life. There is a fundamental difference between falling on water and falling on land, and of this difference it is important to take full advantage by so devising the machine as to provide some permanently buoyant member not readily collapsible, that shall afford a safe refuge for the pilot. There is, indeed, so far as we can see, no reason why the pilot and the engine should fail to emerge intact from the majority of mishaps that are likely to occur in waterplane experiments. We mention waterplanes merely *en passant*, but there is just as much need to go ahead with the construction of dirigibles in this country, and with the further development of land aeroplanes. There are essentially two sides to the situation. One relates to experimental progress, the other to the organised use of apparatus that has been well tried. It is a mistake to confuse the two issues, or to suppose that they are identical. A well-organised Royal Flying Corps, using well-tried machines, with which every member of the Corps is thoroughly acquainted, will be a more effective arm in war than the exploitation of latest inventions, the behaviour of which is characterised by uncertainty. But, it is essential that the experimental type should be encouraged and pushed forward with all speed, and when one is dealing with experimental work of this kind it is impossible to consider the question of cost in the same way that it is considered in respect to the purchase or use of an approved and established article. Experience must be gained, and the cost is but of very minor importance.

We mention these things now because we have often felt that the whole sphere of aeronautics is an extremely difficult one to explain to the general public, and yet it is on public sympathy towards the cause of aeronautics that we depend so much at the present time. The Mansion House meeting that takes place next month is

an occasion when prominent public men will have a unique opportunity of voicing their sympathy with and appreciation of the objects just mentioned, and, as we have mentioned already, we look forward with the greatest possible hope to an important and successful issue from the work that the Aerial Defence Committee of the Navy League has inaugurated.

Waterplanes at Monaco.

The waterplanes assembled at Monaco have very naturally attracted many visitors to the Principality, and among them a large contingent from England. We in this country have every reason to take a direct and very close interest in the development of this class of machine, the more so because, for the moment, there is no reason to suppose that we are behind either in its construction or use. Without question, the problem of the waterplane is a problem apart, capable, in our opinion, of affording fresh opportunities for original design. At the present time constructors are very properly avoiding departure from the methods with which they are familiar.

The waterplane of to-day is an aeroplane with floats instead of wheels and an undercarriage to suit. A few machines there are that present a different line of thought in a concrete form, such as, for instance, the use of a boat-like foundation for a superstructure of wings. For the most part, however, it is the simple aeroplane with floats that really flies.

There are phases of hydro-aeroplaning that can only be appreciated on the spot. A swell on the sea and a lee shore close at hand are not in the least comparable with any sort of aerodrome prepared or natural.

It is not only the wind, but the sea with which one must contend, for the sea, unlike the land, may upon occasion rise to strike the machine a disabling blow. The more one contemplates the situation, the more does it seem necessary so to develop the waterplane from the bottom upwards as to provide a permanent nucleus capable of withstanding a heavy sea.

It is interesting and instructive, for example, that several machines broke their backs in the course of the Monaco meeting, and several also broke their wings. These mishaps must in no sense be regarded as discouraging. On the contrary, they draw attention to the special nature of the conditions that must be faced, conditions that English constructors are as well prepared to meet as anyone else, provided that the demand for machines is maintained.

Indeed, as things stand at the present moment, England is as far ahead as any other nation in hydro-aeroplane construction. It is our chance to lead in the development of the real water flyer; let us hope that we do not prejudice the opportunity.

As we have said, the breakages must not be regarded as disheartening, particularly as they were unattended by personal injury of any sort. It is possible that one must always be prepared to sacrifice the wing structure of a waterplane in the event of an emergency landing, and, as we have indicated above, it seems to us proper to originate the design of such machines from the point of view of providing a permanent nucleus capable of saving the passengers and the engine when all else is wreckage.

It seems apparent that the backbones of waterplanes are called upon to withstand more serious stresses than those of land machines, and the question arises whether they should be regarded as superstructure to be sacrificed in emergency or should form part of the nucleus of the machine. From the standpoint of the modern tractor machine it is evident that the unoccupied portion of the

APRIL 19, 1913.

FLIGHT

MEN OF MOMENT IN THE WORLD OF FLIGHT.
Pilot-Constructor.



MR. E. C. GORDON ENGLAND.

fuselage offers valuable storage space for flotation bladders, and if used as such then it must not break, or if broken must not readily destroy its buoyancy. If liable to be broken at all readily, then it must be capable of being replaced with ease, just as, for instance, are the wings.

These considerations are among many that stand out prominently, in our opinion, among the many interesting lessons of the Monaco meeting. We advise British constructors to devote themselves most seriously to this

problem of the real waterplane, for it is something that Britain, above all other nations, needs. To this end let us hope that Mr. Churchill will foster the use of hydro-aeroplanes in the Navy by every means in his power, and not hesitate to encourage the use of machines that are now available from any thought that in future others will be far superior to what we have at present. For once in a while we are in at the beginning, and the *experience will be invaluable.*

✱ ✱ ✱ ✱ CHEVILLARD'S CHUTE DE CÔTÉ.

By V. J.

SURELY, nothing could be more wonderful than to see—when standing on solid (in parts) *earth* at Hendon—Chevillard make one of his marvellous dives! That's what I thought when I saw him "doing it" during the recent meetings up at the aerodrome. I altered my views, however, last Saturday, when I alighted from the 80-h.p. Henry Farman biplane (splendid 'buses they are!) after a flight with Chevillard himself. The diving biplane, seen from the ground, was wonderful; but the ground seen from the diving biplane was more wonderful still. A *vol plané* is exhilarating, but only a little more so than the mountain railway at the White City. A spiral *vol plané* is, to my mind, much more exciting. But Chevillard's side dip is quite different, and takes the breath out of all of them.

What has always impressed me about a flight in an aeroplane is the peculiar appearance that dear old Mother Earth assumes when one views her from a height of, say, three or four hundred feet, or upwards. This has been aptly described by some as like looking into an immense saucer—for, of course, no matter how high you go, you always see the horizon line level with your eyes. I was very anxious, therefore, to observe how things looked when banking at nearly 90° in an aeroplane, and although it is like attempting the impossible I will endeavour to give an idea of what I felt and saw during the experience.

We started with a very rapid ascent—in itself a grand sensation—and made a wide left-hand circle until we were over the shilling enclosure. Then—I held on tight! But I need not have troubled, for it was only just as the biplane commenced to bank that I felt a very slight tendency to leave my seat (I had the services of a safety belt) and after this it felt as though someone were holding me down on my seat. This was a little unexpected—as everything had happened so quickly that I had not had time to realise that centrifugal force would keep me *in situ*—so I held on. Higher and higher went the right side until nearly vertical and almost simultaneously we began to dive. During this first dive I looked straight ahead. There, near the horizon, was the Welsh Harp water, then suddenly the whole horizon line—Welsh Harp and all—tilted over to the right, until almost vertical instead of horizontal, and then the whole ground and the "vertical horizon" seemed to swing sideways to the right for all the world like a table-cloth slipping over the edge of a slippery table. By this time I was looking straight on top of those immediately below, although I was still sitting in my normal position, looking forward. Thus we dived till about 100 ft. or so from the ground, which approached with startling rapidity, when we flattened out and commenced to climb again. As we made our way across the aerodrome I was looking to the right at a train on the railway, when Chevillard made a sharp, banked, left-hand turn. The ground flattened itself out, and

finally disappeared from view, so I turned quickly to the left, and found the ground "swivelling" up on that side. The result of this quick movement on my part was a weird sensation like that experienced by many when they "fall" in their dreams.

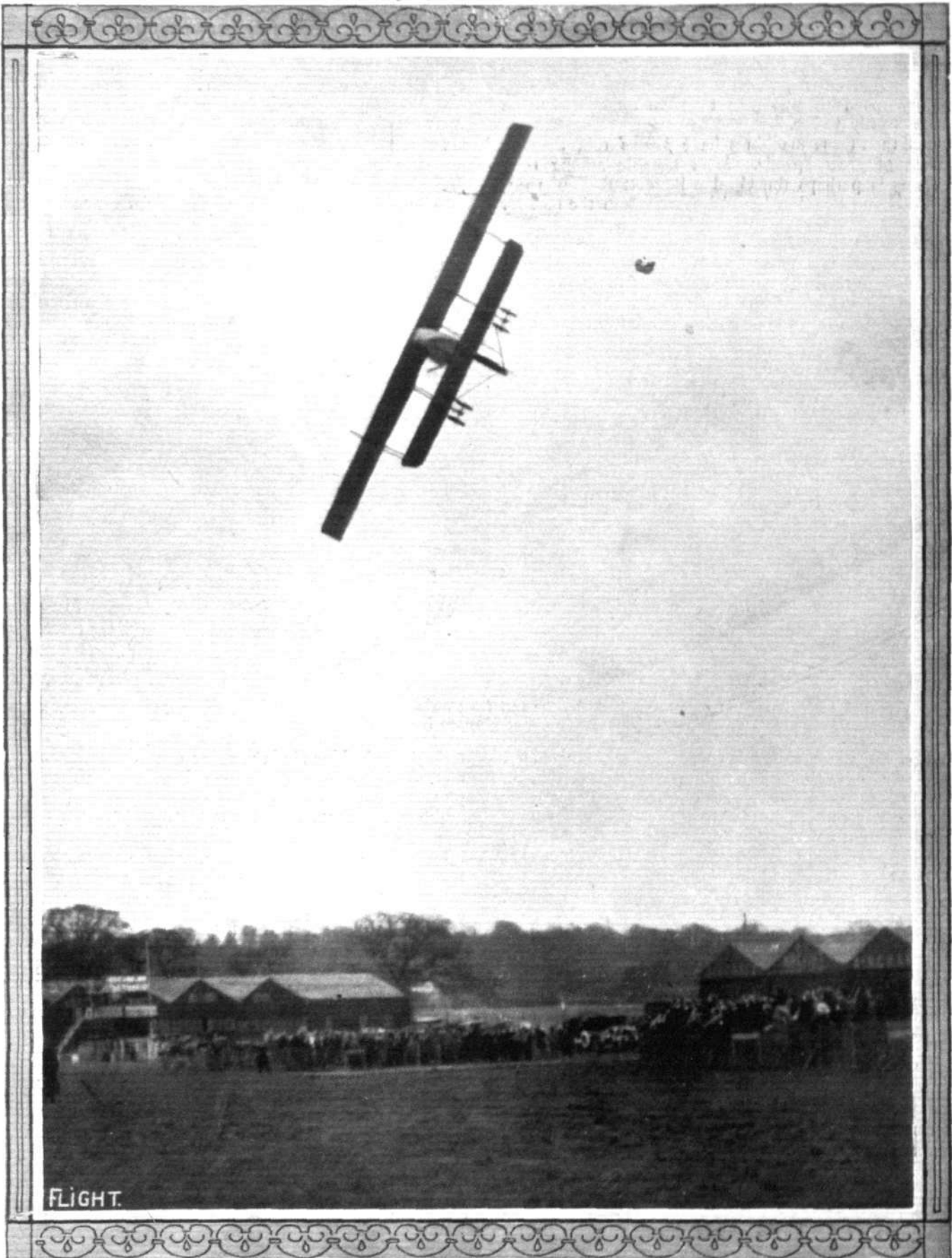
During the next side dip, I looked over the left side towards the lower wing tip. It was in this way that one fully realised the extent to which the biplane was banking. The sensation during the first movement, that of banking, was similar to that of a *vol plané*, except that the fact of seeing the wing tips below indicated the true position of the biplane. Then, as we began to dive, the ground appeared to swing towards the nose of the machine, revolving at the same time in a clockwise direction. The sensation was very much as though someone had taken that big saucer, tipped it up, and was turning it round. Then the horizon again came into view above the top wing tip (left) and almost parallel to the struts. It made me realise—for the first time, I assure you—the full meaning of those humorous anecdotes in which a gentleman observes similar evolutions whilst returning home (after a business appointment).

I think I have related those features of my flight with Chevillard that impressed me most, but the whole flight, from beginning to end was sensational, especially when "turkey trotting," and quite different from an ordinary flight. And Chevillard? Well, he sat there in front of me, almost motionless the whole time, and it was with the greatest difficulty that I noticed at any time what he did in the way of controlling the machine, so I will not attempt to explain how he does the trick from actual observations, but give his own explanation. First of all he generally switches off the engine; then he banks the machine over by bringing the control lever sharply over to the left, following up this movement, almost simultaneously, by pushing the lever forward. The machine then begins to dive, and he immediately returns the control lever to its normal position, at the same time bringing the rudder over with his left foot, banking and diving the machine still further. By this time he usually switches on again. At the same time that he puts the rudder over, he brings the control lever right back, raising the elevator. Here is the most interesting moment of the dive, for we are brought face to face with conditions similar to those experienced by the late Lieut. Parke when he made his famous dive in the Avro enclosed biplane.

I do not intend to go further in this matter, but leave it to my readers to argue it out for themselves, and get lots of fun out of it—I did at the time.

Yes! Chevillard you are truly wonderful. Once you looked round during one of your "spasms" and your eyes were sparkling, so I am certain you must thoroughly enjoy these dives; I did, and I thank you. I shall not forget it—until someone takes me up in the near future and flies a couple of miles upside down.

Hendon 1913



"Flight" Copyright

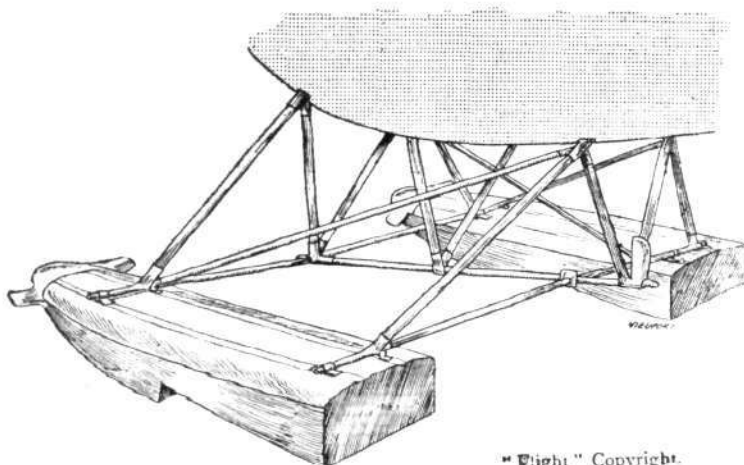
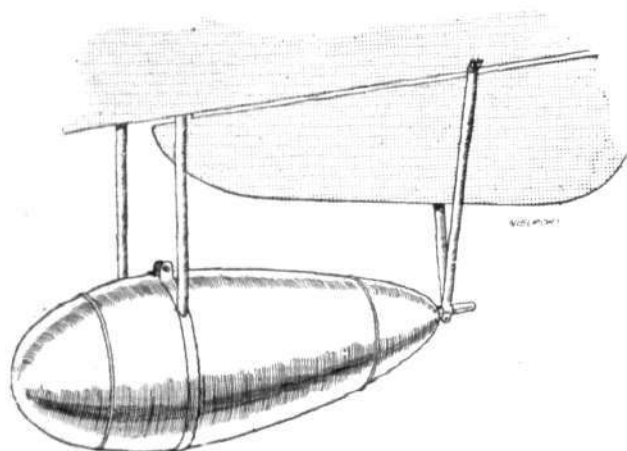
One of Chevillard's marvellous banks, with passenger, on the Farman biplane at Hendon Aerodrome.

THE NIEUPORT HYDRO-AEROPLANE.

When the Nieuport monoplane was exhibited for the first time in England, at the 1911 Aero Show, it aroused great interest, chiefly, perhaps, on account of the extraordinary speeds it was said to have attained with an engine of only 30-h.p.

Since then these machines have proved that they are capable of great speeds. Most notable among their successes is perhaps the Gordon-Bennett Race of 1911, when a Nieuport, piloted by Weymann, won the race for America.

The Nieuport brothers, whose tragic deaths within so short intervals is a great loss to the science of aviation, were quick in realizing the possibilities of the hydro-aeroplane, and it was only to be expected that they would be successful when they turned their attention to this branch of aviation.



"Flight" Copyright.

Attachment of main floats (on right) and (on left) the tail float on the Nieuport hydro-aeroplane which was at the last Olympia Show. The machines at Monaco have a three stepped keel float.

At St. Malo, Weymann, piloting one of these machines, won the Grand Prix of the meeting by flying from St. Malo to Jersey and back. Later he created a record for the longest over-sea flight in a hydro-aeroplane, by flying from Belgium to Vernon in France, also on a Nieuport.

In its general appearance the hydroplane, which was exhibited at the last Olympia Show, resembles the land machines, with which our readers are familiar, excepting, of course, the chassis, which has been modified to accommodate floats instead of wheels. The two main floats, which have a single step about half way along their length, are set widely apart and support the body through a structure of steel tubes of streamline section. On either side of the rounded nose of each main float is a small metal wing, set at a comparatively great angle of incidence, the object of which is to keep the float from diving under in a rough sea. The material

used in the construction of the main floats is cypress, the top of them being covered with canvas. Under the tail of the machine is a single, small egg-shaped float, connected to the fuselage by steel tubes.

The power plant consists of a 14-cylinder 100-h.p. Gnome engine, driving directly an Integral propeller of 8 ft. 6 in. diameter, which has armoured tips in order to prevent splitting in case of water sprays hitting the blades.

Behind the engine is the pilot's seat, which is of the bucket type. The machine is controlled by the usual Nieuport control system, which differs from most others in that the action of warping is carried out with the feet. A rocking shaft, sloping from the floor of the machine down to the lower extremities of the rear chassis struts, carries at its upper end a cross-bar on which the pilot rests his feet, and from a small crank lever on the lower

end of the rocking shaft, warping cables are taken to the rear spar. When the machine tilts to the left the pilot presses the cross-bar down with his right foot, thereby pulling down the trailing edge of the left-hand wing. A to and fro movement of the centrally pivoted hand lever operates the elevators, while a sideways motion actuates the rudder.

On a dashboard in front of the pilot's seat is a complete set of instruments, while lower down in the cockpit is a starting handle, which enables the pilot to start the engine without the help of a mechanic. Behind the pilot seats are provided for two passengers sitting side by side. The fuselage is of the same shape as that which characterises the land machines, the section around the cockpit being very deep and tapering to a knife's edge at the rear, where are attached the tail planes, which are of the usual Nieuport type, as are also the main planes.

A Double Crossing of the Channel with Passenger.

A NEW record was made by Mr. Gustav Hamel on Friday of last week when, accompanied by Mr. Dupre, he flew across the English Channel and back without stopping. Starting from Dover about ten minutes past nine, Mr. Hamel at once steered his Blériot out to sea, and struck the French coast to the east of Calais. Flying along the coast, Dunkirk was reached, and then the machine was turned in the direction of Dover, where a safe landing was effected. The time for the trip of about 120 miles was 1 hr. 35 mins., a very fine record considering the conditions, there being a strong wind blowing and a lot of snow clouds about. The average altitude during the trip was about 2,000 ft. Once during the trip Hamel glided down to within hailing distance of a German liner, he

BRITISH NOTES OF THE WEEK.

New Mother Ship for Naval Wing R.F.C.

VERY shortly H.M.S. Actæon will be replaced as mother ship of the Naval wing of the Royal Flying Corps by the light cruiser *Hermes*, which, if names count for anything, is surely more appropriate. When the *Hermes* is commissioned for her new duties the officers and men of the Naval Air Service, who are at present borne on the *Actæon* will be transferred to the *Hermes*.

New Naval Air Stations.

WITH the announcement on Saturday last of the appointment of their commanding officers, two more naval aviation centres came into official existence. They are at Harwich and Yarmouth. Capt. C. E. Risk, R.M.L.I., who had the mishap last week, being appointed to the former, and Lieut. R. Gregory, one of the first four naval officers trained at Eastchurch, to the latter. Lieut. C. L. Courtney and Lieut. T. S. Creswell have also been appointed to the Yarmouth station.

The Mansion House Meeting.

AT the meeting which the Navy League is arranging to be held by the kindness of the Lord Mayor of London at the Mansion House on May 5th, the speakers will include the Duke of Argyll, the Duke of Bedford, Mr. A. J. Balfour, Field Marshal Lord Roberts, Field Marshal Lord Methuen, Admiral Lord Charles Beresford, Admiral Sir Edward Seymour, Lord Devonport, Lord Kinnaird, Lord Rosebery, Lord Brassey, Sir C. D. Rose, M.P., Lord Desborough, Lord Montagu of Beaulieu, and other leaders in public life.

Presentation to Miss Trehawke Davies.

IN appreciation of her services to aviation, Miss Trehawke Davies was presented with a handsome silver rose-bowl by the Women's Aerial League on Wednesday week. The presentation was made by the Hon. Lady Shelley, sister of the late Hon. C. S. Rolls, at a reception held at the residence of the Dowager Lady O'Hagan.

The Dep. "Sea-Gull."

WE hear very favourable accounts of the behaviour of the "Sea-Gull" hydro-aeroplane—that formidable-looking warplane which was such a prominent feature of the Dep. stand at Olympia. Last week-end Lieut. Porte was giving it some preliminary testing at Osea Island, on the Blackwater. She gets awing quickly and easily, is very fast, and takes to the water again as if in her natural element. The official tests Eastchurch way will probably be put through within the next few days.

Testing the Radley-England Hydro-Aeroplane.

DURING last week, successful tests were made at Huntingdon with the Radley-England hydro-aeroplane, which was fully described in our last issue. Piloted by Mr. England and with two passengers on board, on Thursday week it was in the air for twenty minutes at a speed of about sixty miles an hour, and in the evening another flight was made with one passenger. The next day Lieuts. Reynolds and Hetherington were taken up in the machine by Mr. England, while a lady was among the passengers carried during some trial flights on Tuesday.

Willows Aircraft School.

A BALLOON ascent, with three pupils, Mr. H. Barber, Capt. Bernal and Mr. R. W. Crocker, was made from the Old Welsh Harp Grounds, Hendon, in charge of Mr. Willows, on Wednesday last week. With a light N.E. wind a course was made over Acton and Richmond Hill, the descent being effected near Epsom at 6.30 p.m.

Nationalities at Brooklands.

AMONG the officers learning to fly at the Bristol school at Brooklands recently were a quartette representing England, Ireland, Scotland, and Wales. The officers were Lieut. E. Peirse (Royal Navy), Lieut. Morgan (Irish Fusiliers), Lieut. Robertson Dobie (Gordon Highlanders), and Lieut. W. Picton Warlow (Welsh Regt.), and there was no mistaking where they hailed from. Incidentally, they were taught by two Englishmen, F. Warren Merriam, the *chef pilote*, and Bendall.

An Echo of the Past.

AN item at a sale at Christies, last week, recalled a famous aeronautical expedition of 77 years ago, a series of nine pictures, representing the balloon expedition from London to Weilbury, in 1836, being put up for sale. A sum of 70 guineas was realized.

A Waterplane in the Solent.

MR. H. R. BUSTEED, who is testing the Bristol hydro-aeroplane in the Solent, had an exciting experience on Tuesday morning. He had left the Saunders' aviation shed up the River Medina at 5 a.m., and went down the river to Cowes. Continuing, he rose from the water and started to cross the Solent to Southampton

Water, but after going a little way he decided to come down in order to attend to the motor. The machine, however, came down so heavily on the front float that it broke and caused the machine to capsize. Fortunately Busteed is a good swimmer, and by hanging on to a wing float he managed to keep afloat for over half an hour, until he was picked up by a boat from a passing steam hopper, and after a short rest was little the worse for his adventure. This was lucky, but what is this we hear about a liner passing earlier, and entirely ignoring the situation!

A Memorial to Geoffrey England.

AT the annual meeting of the Haughton School Old Boys' Association it was suggested there should be a school memorial of Geoffrey England, who was an old Haughtonian. It was thought that perhaps the best and most useful memorial would be to found one or more scholarships in his old school for the benefit of the children of aviators who have lost their lives while flying. Mr. Geo. H. Bowman, of 43, Moorgate, York, is the hon. secretary, and would be glad to receive subscriptions or to give any further particulars.

Chevillard at Aldershot.

ON the 8th inst. Chevillard was at Aldershot and did some highly spectacular flying in spite of a strong wind. Several times the Henry Farman machine was lost to sight among the clouds.

A Colonial Minister at Farnborough.

AMONG the visitors to Farnborough on the 9th inst. was the Hon. W. A. Holman, the Attorney-General of New South Wales, and after inspecting the hangars and workshops under the guidance of Major Sykes, he was taken up for a flight on a new Breguet piloted by Capt. Shepherd.



The beautiful Britannia trophy, the work of Mr. G. T. Power, of 199, Piccadilly, presented to the Royal Aero Club by Mr. H. Barber for a challenge competition.



Capt. C. E. Risk, R.M.L.I., and Artificer Frank Susans, with the Farman biplane, landed in a ploughed field at Sanderstead last Friday. Capt. Risk afterwards rose easily, it being subsequent to this that, through engine trouble, the machine was wrecked at Queenborough.

A Mishap at Queenborough.

It was very hard luck that Capt. Risk, after making a splendid flight from Farnborough on a biplane on the 11th inst., should have met with disaster when so near his destination. The machine was

for the naval wing of the Royal Flying Corps, and had been tested at Farnborough. Everything went well until the machine had passed over Sheerness Harbour, when apparently the carburettor froze up owing to the intense cold. Capt. Risk attempted to plane down to the marshes near Queenborough, but when near the ground the machine capsized, both pilot and the passenger, Chief Artificer Susans, being thrown out. Both were taken to Sheerness Hospital, when it was found that their injuries were not very serious, and Susans, in fact, is now out of hospital.

The Military Point of View.

LECTURING at the Duke of York's Headquarters, Chelsea, Lieut.-Colonel V. S. Sandeman, King Edward's Horse (the King's Oversea Dominions Regiment), presiding, on the 9th inst., Major Sykes said that although in peace time they might be able to go out only twice a week on account of the weather, yet in warfare they would take the machines out, and get valuable information five days out of seven. It meant taking risks, which was a soldier's job. By good training and with excellent machines accidents might be minimised considerably. At an altitude of 2,000 ft. one was more or less all right. The aeroplane should effect in three hours what a cavalry patrol could do in three or four days. He thought future fighting in the air would be confined to small numbers, such as patrols and scouts trying to break their way through.

The Queen's Sympathy.

HER MAJESTY the Queen has been graciously pleased to accept a copy of "Soldier and Aviator," a tribute to the memory of Captain Patrick Hamilton, of the Royal Flying Corps, who was killed during the last autumn manoeuvres. Writing to Miss Hamilton, Her Majesty's private secretary says:

"Her Majesty thanks you very sincerely for the book, and is very much pleased to have it, and deeply sympathises in the great loss."

The memoir is written by his sister, Ethel Hamilton (C. W. Daniel, 1s. nett), and all profits accruing from the sale will be devoted by Miss Hamilton to the cause of aviation.

FOREIGN AVIATION NEWS.

Paris to Berlin Flight Accomplished.

AT last an aeroplane has made the journey from Paris to Berlin, the honour falling to Daucourt and his Borel monoplane. Starting from Villacoublay at 5 a.m. on Tuesday, he made the journey of 252 miles to Liege in 2 hrs. 34 mins. At one o'clock, he landed at Hanover, and after a rest of two hours started on the last stage to the German capital, and landed safely at Johannisthal at 6.39 p.m. His total time was 13 hrs. 39 mins., while the flying time was about 8½ hours.

Audemars also started from Villacoublay on a Morane monoplane, and after a stop at Mezieres, got to Wanne, in Westphalia, where he stayed overnight on account of the strong winds.

New Passenger Records.

AT Orleans, on Tuesday, Champel, on his enormous biplane, which has a 10-cyl. Anzani motor, beat the world's passenger records up to 250 kils., and set up a new duration record for pilot and four passengers of 3 hrs. 1 min. The new time records are 30 mins., 40 kils.; 1 hr., 82 kils.; 1½ hrs., 122 kils.; 2 hrs., 165 kils.; 2½ hrs., 208 kils.; 3 hrs., 249 kils. The new speed records are: 50 kils. in 36 m. 31 s.; 100 kils., 1 h. 13 m. 1 s.; 150 kils., 1 hr. 49 m. 11 s.; 200 kils., 2 h. 29 m. 2 s.; 250 kils., 3 h. 1 m. The new distance record is 250 kils. All these are world's passenger records for pilot and four passengers.

Also, on Tuesday, but at Crottoy, Marty, on a Caudron biplane, fitted with a 10-cyl. 100-h.p. Anzani, beat the height records for pilot and three and pilot and four passengers. The former he raised to 1,800 metres, during a trip of 35 mins., beating Chevillard's old record of 1,350 metres, made on a Henry Farman last February. In a second flight of 35 mins. duration, he took four passengers up to 1,450 metres, beating Gougenheim's record of 1,120 metres, also made on a H. Farman last February.

For the Pommery Cup.

IN an attempt for the Pommery Cup, Legagneux, on the 8th inst., on a Morane monoplane, started from Pas des Lanciers, near Marseilles, intending to fly to Calais. After flying for 3 hrs. 20 mins., he landed at Montelimar, and then decided to give up the attempt as he found the conditions too trying. On the same day, Brindejone de Moulinais, continuing his trip from Madrid to Paris, went from Barcelona to Perpignan in 1 hr. 55 mins. On the following morning he went on to Montpellier, and after a rest, continued to Montelimar, and joined Legagneux. In company they flew to Lyon on the following morning, and later made another stage to Chalons-sur-Saône. Sunday morning saw both aviators winging their way towards Paris again, but they decided to stop at Ivry-la-

Montagne. Legagneux completed the trip on Monday, starting from Issy at 7 a.m. and reaching Villacoublay at 4.30 p.m. He landed at Beauvilliers after an hour's flying, as he could not see through the thick mist. His next stop was at Auxerre, from whence the last stage to Paris took an hour and a half.

Touring on a M. Farman.

CHARGED with the duty of inspecting various suggested landing grounds, Capt. Bares accompanied by a sapper, left Buc on a Maurice Farman biplane on the 10th inst. His first stop was at Cosne, and on the following day he made calls at Auxerre and St. Fargeau, while on Saturday he was at Nevers.

Long Flights by French Officers.

LIEUTS. GREZAUD AND GIGNOUX, the two officers who flew over the Zeppelin IV while she was at Luneville the other day, arrived back at their headquarters at Epinal on the 10th inst. On their Maurice Farmans, and each accompanied by a soldier, they left Pont de Vaux, Ain, together, and Lieut. Grezaud arrived at Dijon two hours later, Lieut. Gignoux was a quarter of an hour later in getting to Dijon, as on his way his limbs were so numbed with the cold that he had to land at Beaune in order to warm himself. In the afternoon the two officers arrived at Epinal.

Good Cross-Country Work on a Blériot.

ON the 6th inst., Lieut. Gaubert started from Mailly Camp on his Blériot machine, accompanied by M. Alex. Dumas, the well-known French writer, who is now doing his military service as sub-lieut. of artillery. Aided by a strong wind they covered the 100 kiloms. to Vouziers by Chalons-sur-Marne in fifty mins. Later in the afternoon the two officers went to Rheims in half an hour. On the following morning the return journey to Mailly was made, the officers in order to find their way, being obliged to keep at a height of not more than 300 to 500 metres on account of the snow storms.

A Clerget-Deperdussin at Etampes.

DUVAL with his Deperdussin monoplane with Clerget motor, made a flight of over three-quarters of an hour's duration at Etampes on the 10th inst. He was flying at a height of 1,500 metres for the greater part of the time over Etampes, Etrechy and Guillaux.

Guillaux Ill.

PARIS has missed Guillaux, the popular pilot of the Clement-Bayard monoplanes, who has made so many trips over the French capital. He was taken ill with pneumonia on Sunday week, and his many friends will be glad to hear that he is making a splendid recovery.

Good Work at Etampes.

ON the 8th, Rougerie was testing a Henry Farman biplane, and with three passengers on board made a long flight over the surrounding country. Two days later, Poivre and Dufort made a long excursion in the direction of Dourdan, and Capt. Bertin and Lieuts. Cassin and de Vasselot made lengthy reconnaissances along the Valley of Chalo-St. Mars. Lieut. Combette went over to Orleans and back. On Saturday, Capt. Bertin made a flight of an hour and a half's duration.

More Farmans for Spain.

MAURICE FARMAN was testing one of the machines ordered by the Spanish Government at Buc, on the 11th inst., and on the following day Bernard put a third machine through its trials in the presence of Capt. Herrera. With a full load it climbed 600 metres in 6 mins., and easily carried out the one hour and other tests.

Etampes to Buc on Farmans.

FLYING through the rain Maurice Farman, accompanied by a Swiss officer, Lieut. Reynold, and Derome, also with a passenger, made the journey from Etampes to Buc on Saturday last. Their mounts were Maurice Farman biplanes of the military type.

Seven more Blériots for French Army.

BEFORE a military commission, Perryon and Domenjoz, on Saturday, at Buc, carried out official tests with seven Blériot military machines. These seven machines complete the last order for fifteen machines placed with the Blériot firm by the French Government.

A High-Powered Caudron.

ALTHOUGH there was a strong wind and heavy rain, both Gaston and Rene Caudron were busy trying a new machine fitted with a 10-cyl. 100-h.p. Anzani engine on the 11th inst. Marty afterwards took up two passengers for a lengthy flight over the country.

A Good Ending.

BY way of finishing up his period of instruction at the Farman school at Buc, Sergeant Battini, on Saturday, made a flight of over an hour at a height of more than 250 metres.

Cross-country Work on Deperdussins.

ON Saturday, an escadrille of four Deperdussin monoplanes was ordered to go from Maubeuge to Sissonne Camp in order to witness some artillery practice. The order was carried out by Lieuts. Radisson, Lalanne, Rochette and Verdier, each accompanied by an observer, the time taken for the trip being 40 mins. Lieut. Brocard and Sergt.-Maj. Didier also went from Rheims to Sissonne Camp on their Deperdussins.

Juvisy to Orleans with 3 passengers.

ON the biplane which he has designed and built himself, Champel on Monday took three passengers from Juvisy to Orleans, the 100 kiloms. being covered in 44 mins. at a height of 800 metres. The biplane is fitted with a 100-h.p. Anzani motor.

Compiegne to Issy on a Caudron.

ON his Caudron biplane, which is fitted with a 45-h.p. 6-cyl., Anzani motor, Bosano made a trip at a very great height from Compiegne to Issy.

Good Flying at Pau.

ON Monday, Lieut. Malherbe flew from Pau to Lourdes and back on his Blériot monoplane, the trip taking 55 mins., and being carried out at a height of 1,700 metres. Sapper Thoret made a flight of an hour and a-half over the aerodrome, finishing with a fine spiral *vol plané* from a height of 1,800 metres.



KITE AND MODEL AEROPLANE ASSOCIATION.

Official Notices.

British Model Records.

Hand-launched	{ Distance	... A. E. Woollard	... 477 yards.
	{ Duration	... A. F. Houlberg	... 89 secs.
Off ground	{ Distance	... G. Rowlands	... 232 yards.
	{ Duration	... A. F. Houlberg	... 51 secs.
Hydro. off water	{ Distance	... G. P. Bragg-Smith	... 25 secs.
	{ Duration	... F. G. Hindsley	... 173 yards.
Single-tractor screw,	{ Distance	... J. E. Louch	... 44 secs.
	{ Duration	... J. E. Louch	... 40 secs.
Do., off ground	{ Distance
	{ Duration

Bench Tests for Model Engines in connection with Aero Show.—These tests were carried out on Saturday, April 12th, at the East London College, Mile End Road, by Professor J. T. Morris. It is hoped that full details and charts will be able to be printed next week. Out of the six competitors only three competed, viz.: Messrs. Mayer and Stanger with petrol plant, and Mr. C. Desoutter with CO₂ plant.

Donations and prizes Needed.—It is hoped that members will endeavour to obtain the gift of prizes as well as donations for the Prize Fund, as it is necessary that if the Council are to arrange all the competitions that the Rules Committee have suggested then they must obtain at once help from those interested in aeronautics.

Discussion.—Any reader will be welcomed at the discussion on "Hydro-Aeroplanes" to be held on April 24th, and a ticket will be forwarded to anyone on application.

Hydro. Trials.—All applications should be sent in to the hon. sec. at once for these official trials that take place at Wimbledon on 26th.

Flying Over a Dirigible.

ON Monday the dirigible "Dupuy de Lome" was sighted at Rheims on her way to Maubeuge, and immediately Capt. Roisin and Lieut. Brocard, on their Deperdussins, set off in pursuit. In 4½ mins. the aeroplanes had risen 1,400 metres, and were circling above the dirigible in a favourable situation for attacking should it have been necessary. In the evening Lieut. Brocard went over to Sissonne Camp.

Deaths of Two German Pilots.

A FATAL accident occurred at the flying grounds at Gelsenkirchen, on the 10th inst., the machine piloted by Lichte being caught in a remous and dashed to the ground, the pilot receiving fatal injuries. The second death was that of Eberhard, who was accompanying the expedition of Lieut. Schroeder to Spitzbergen, and who died on the warship which was conveying the expedition to Tremenberg.

A Parseval for Turkey.

IT is reported that the Turkish Government have bought a small Parseval airship, in the construction of which several parts of the P.L.5. which was burnt in 1911, have been utilized.

A Fine Flight in Austria.

A NEW Arrow biplane for the military flying ground at Neusatz, in Southern Hungary was delivered in splendid style on the 10th inst. With Col. Uzelac as pilot, the machine was flown from Fishamend, near Vienna, to Neusatz, a distance of 400 kiloms., in exactly three hours, the average altitude being 1,500 metres. A telegram sent by the aviator advising his departure from Fishamend was delivered at Neusatz after the biplane had landed there.

War Honours for Italian Aviators.

ON account of services rendered, either with aeroplanes or airships, in the war in Tripoli, five Italian military pilots have been decorated with the military Order of Savoy, thirteen officers have been presented with silver medals, and three with bronze medals.

An Italian Pioneer Honoured.

BARON LEONINO DA ZARA, who has done so much to forward the cause of aeronautics in Italy, has been honoured for his work in this connection by being nominated a command of the order of The Crown of Italy.

Flying in Morocco.

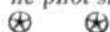
SOME fine work was done by an escadrille stationed at Biskra on Monday. The pilots were Lieuts. Reimbert, Cheutin, Jolain and Sergeant Benoist, and they were mounted on H. Farman biplanes fitted with 80-h.p. Gnome motors and Intégrale propellers. In company the four machines, one of them carrying Col. Bouticieux, were piloted from Biskra to Touggourt, a distance of 220 kiloms.

An Argentine Fatality.

WHILE flying close to Rosario, near Buenos Aires on the 11th inst., the Argentine pilot Perez Arzeuo fell from a height of 1,200 feet and was instantly killed.

A Fatality in Chile.

WHILE on the last stage of a 700 kilom. flight from Concepcion to Santiago, in Chile, a cylinder of the engine of the machine piloted by Luis Acevedo exploded, and the machine fell to the ground. The pilot succumbed to his injuries shortly after.



Aerial Display.—Capt. Penfold, the Australian aviator, is giving an aerial display, comprising a balloon ascent, bomb firing, and parachute descent, at the Croydon Common Football Ground, to-day (Saturday 19th), for Messrs. O.T., Ltd. The association has been asked to arrange a model display and competition, but as request only reached us on going to press, it is doubtful if it can be fixed in time. However, a scratch competition will be held, therefore members and friends are asked to turn up. Travel on L.B. & S.C. Ry. to Selhurst station—ground opposite. All members with models will be admitted free. Messrs. O.T., Ltd. are presenting a gold medal, 1st prize; silver medal, and prize.

27, Victory Road, Wimbledon, S.W.

W. H. AKEHURST, Hon. Sec.



MODEL CLUB DIARY AND REPORTS.

CLUB reports of chief work done will be published monthly for the future. Secretaries' reports, to be included, must reach the Editor on the last Monday in each month.

Aero-Models Assoc. (N. Branch) (15, HIGHGATE AVENUE, N.).

HAND-LAUNCHED duration contest at Finchley to-day, Saturday, at 3 p.m. Prize 3s. 6d. The secretary hopes that all members will endeavour to turn up, and so make a successful opening contest for the season.

S. Eastern Model Ae.C. (1, RAILWAY APPROACH, BROCKLEY).

WEEK-END flying will take place at Woolwich (on the Common), Lee, Blackheath and Mitcham, at the usual times. On Monday, Wednesday and Friday evenings of next week flying will take place at Brockley until dusk.

Models

Edited by V. E. JOHNSON, M.A.

The Scientific Study of Models.

SINCE this section was first started in FLIGHT it has been our aim to encourage in every way the study of models from a scientific standpoint, not an advanced or abstruse theoretical standpoint, but from a point of view that it is quite within the scope of anyone either taking up this study from the practical experimental point of view, or becoming perhaps nothing more than an interested person in the work of others, to either experiment in it with some definite aim in view (otherwise than merely with an idea of obtaining some maximum distance or duration), or to encourage others to do so by any means that may lie within their power. We are not the least adverse to the sporting side of the question, which is not without its value (apart altogether from the healthy exercise, &c., it gives), in interesting others in aeronautical matters, some of whom would otherwise undoubtedly manifest no such interest; and from a national point of view, apart from any other, it is most vital that every possible person should be so interested and aroused to some adequate grasp of the present critical situation in which this country stands. The interested boy of the present day can become the efficient flying officer of the near future, and it is men that are wanted—far more even than machines—men, as Mr. H. G. Wells says, “of the office-aviator type; of the research-student type, of the engineer type, of the naval-officer type, of the skilled sergeant-instructor type.” Granted we have the men, the machines at once become a possible factor, even supposing them non-existent; but of what use are the machines without the men? and of what use the machines if they are less efficient than those of our rivals? We look to see a strong revival (at this time of the year always at their lowest ebb) of model aero clubs during the next month or six weeks. Now is the time for secretaries of waning or, possibly, almost defunct clubs to arouse themselves and stir up the still smouldering embers, and not to be satisfied until they have fanned them into a brighter flame than at any time of yore. Any club which sets earnestly to work with some definite research aim in view could not fail to add some quota to the sum total of aeronautical knowledge, and can they convince any technical college near which they may happen to reside that they are bent on serious work, they will find them in many cases we know, if not in all, quite willing to assist them. Such institutions are only too pleased to encourage any band of earnest workers, more especially when it is of such importance as the one we have under consideration. Research work, no matter how modest its character, cannot of course be carried on without money and a person's time (which is its equivalent), and it is just at this point there comes in the value of funds, prizes, &c., either as a means to carry such work on or as a reward for successful results already obtained. Such prizes, &c., when given for some stated result or for experiments to be carried out under certain stated conditions, often have an additional value. A prize has just been offered by Colonel J. D. Fullerton for a competition (under the auspices of the K. & M.A.A.) for models of a weight between $\frac{3}{4}$ lb. and $1\frac{1}{2}$ lbs. which have to carry a useful load of $\frac{1}{4}$ lb.—the machine being one which has a single propeller; qualifying duration 20 secs. The proposed date is July 5th. We have in this case a most interesting competition, not lacking even on its sporting side, with a definite aim in view, the useful weight, of course, representing in the case of a full-sized machine, passengers, bombs, guns, &c., &c.

With a view to obtaining more scientific and accurate results, it is proposed to alter the (faulty) efficiency formula

$$\frac{\text{duration} \times \text{weight of model}}{\text{weight of rubber}} \quad \text{to the formula} \quad \frac{\text{load} \times \text{distance}}{\text{power} \times \text{time}}$$

which is due to Mr. C. Ian Burrell, of Newcastle-on-Tyne.

The following is the substance of Mr. Burrell's communication to the K. and M.A.A. :—

The most efficient machine is that which transports the greatest load in the shortest time over the greatest distance. The formula should therefore be the one stated above. For the—

Load. Take the total weight of the model (if no useful weight be carried).

Power. A given weight of rubber represents a given number of ft. lbs. of energy capable of being stored; hence

$$\frac{\text{weight of rubber}}{\text{duration of run}} \quad \text{gives power in} \quad \frac{\text{ft. lbs.}}{\text{per sec.}}$$

Distance. Owing to the difficulty of obtaining long straight flights, Mr. Burrell suggests timing each model out and home over a

100 yds. course, multiply this speed in yards per sec. by the maximum duration of the three flights to obtain the maximum distance a model is capable of flying. This would mean 5 flights for each competitor, and would, of course, take up time, but the number could be reduced, or reduced by an eliminating trial, say, a 40-secs. maximum*, or say a construction elimination, but probably the elimination would take as long as the testing of the few which would be eliminated. However, my policy is that if a thing is worth doing, do it properly or not at all. This makes the formula :

$$\frac{\text{load} \times \text{distance}}{\text{weight of model} \times \text{duration of run} \times \text{distance}} = \frac{\text{power} \times \text{time}}{\text{weight of rubber} \times \text{duration of flight}}$$

assume duration of run of rubber motor = duration of flight, and give the competitors the benefit of any glide. The formula then stands :

$\frac{\text{load} \times \text{distance}}{\text{weight of model} \times \text{duration of run} \times \text{distance}} = \frac{\text{power} \times \text{time}}{\text{weight of rubber} \times \text{duration of flight}}$
Of course the speed contest over the measured 100 yds. could be the subject of a good deal of “twisting,” as people could adjust for high speed and then readjust to normal when competing for maximum duration. Speed should therefore really be taken half wound up. Distance measured from point of start to point of landing is subject to so much luck. By the aid of a slide rule speed in yards per sec. could be easily obtained, and so could the final distance.

The Model Aero Motor Tests.

The model power plants exhibited at Olympia under class 5 were tested on Saturday afternoon last at the East London College, Mile End Road, by Professor J. T. Morris (on behalf of Dr. Thurston, who is away from England at present), who very kindly gave his services for the occasion. Out of the original exhibitors at Olympia only three competitors put in an appearance, viz., Mr. Charles Desoutter, Mr. Frederick Mayer, and Mr. D. Stanger. Owing to an accident which happened to Mr. Desoutter's CO₂ plant in the initial round, he

was placed *hors de combat*, and the final issue lay between the two petrol motors of Mr. Mayer and Mr. Stanger. Both these motors have been illustrated in back numbers of FLIGHT.

The conditions laid down in the rules were: The motor to be judged on a weight per horse-power basis; the ratio not to exceed 8 lbs. per h.p. The weight to include all accessories, with fuel for a minimum run of 2 mins., to be taken on a bench test, the total weight not to exceed 16 lbs.

Each motor was fitted with a brake in the form of a piece of wood 2 ins. square, and of suitable length, the beam flat on all

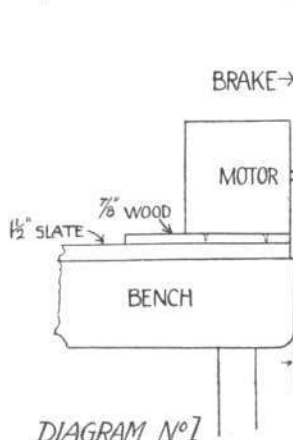


DIAGRAM No 1

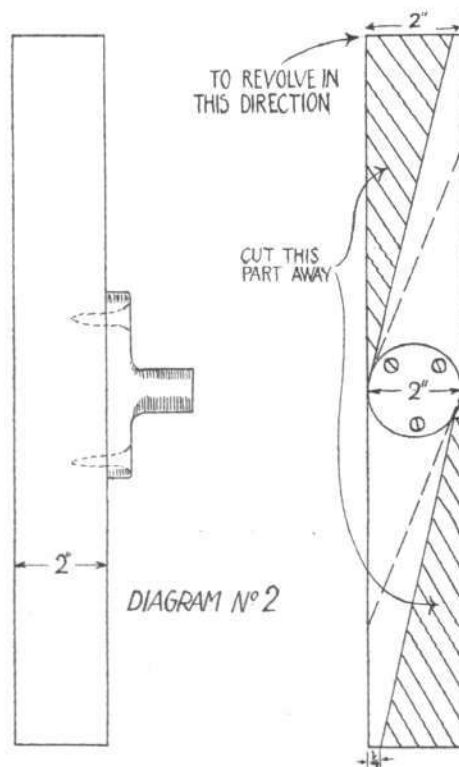


DIAGRAM No 2

* Minimum?

faces, 2 ins. wide on front and back face. If the competitor found (on trial before the competition) that the model ran too fast with the wooden brake (which took the place of the ordinary propeller), then it was to be discarded and a fresh piece of wood used of greater length. If, however, the motor was found to run too slowly, then equal pieces were to be cut off each end as shown by the dotted lines in diagram 2, sufficient wood to be cut off to obtain the best results.

Both motors were given three trials of two minutes each, and both



ONE OF THE TWIN CYLINDERS
ENCASING THE GEARED
RUBBER MOTOR

were successful in obtaining three very good runs without hitch of any kind. In Mr. Mayer's case (Bonn-Mayer two-cylinder V type), in his first trial his speed varied from 1,150 to 1,035 r.p.m.; in his second from 1,130 to 1,040; and in his third from 1,090 to 1,025.

In Mr. Stanger's case (4-cylinder V type), his speed varied from 1,300 to 950 r.p.m. in the first trial, from 1,300 to 980 r.p.m. in the second, and from 1,250 to 1,020 in the third. Both motors were handicapped as to heating, in not having a tractor screw to cool them by its slip stream.

During the intervals between the runs the motors were cooled by means of an electric fan. The wooden "brakes" have, of course, been left at the College for Professor Morris to determine the h.p., &c., necessary to drive them at the speeds at which the motors drove them; the results (which will be awaited with considerable interest) will be published later.

So far as we know, these tests are the first actual scientific officially-conducted tests that have as yet been made in the case of model aero motors. Thus from an aeromodelist's point of view the occasion is one of especial interest. It is unfortunate, not to say disappointing, that under the circumstances more of those who exhibited did not see fit, or were unable, to submit their models to these most important tests; it is just this kind of knowledge that is so badly wanted in model aeronautics, and which so few (comparatively speaking) seem to appreciate. Now, however, that a commencement has been made, we shall no doubt see a considerable increase in these and other tests in the near future.

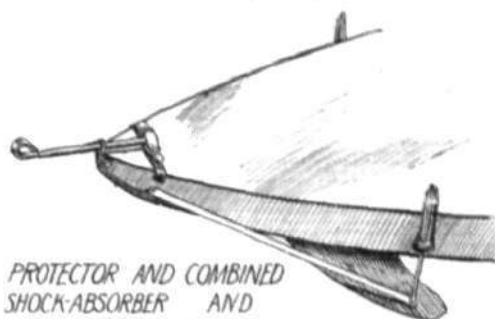
The Forthcoming Discussion on Hydro-Aeroplanes.

It is to be hoped that the above discussion at the St. Paul's Institute, Floral Street, Covent Garden, at 7.30, will be well

in whole or part, diagrams, &c., in order that any speaker may make his remarks as clear as possible to the less initiated present. It is hoped that this example will be followed.

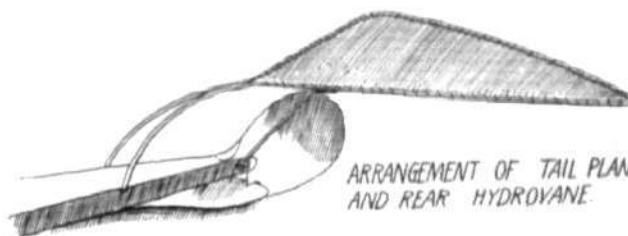
The Fleming-Williams Hydro-Aeroplane.

We give this week a photograph and some drawings of various details of the machine exhibited by this pioneer worker at Olympia.



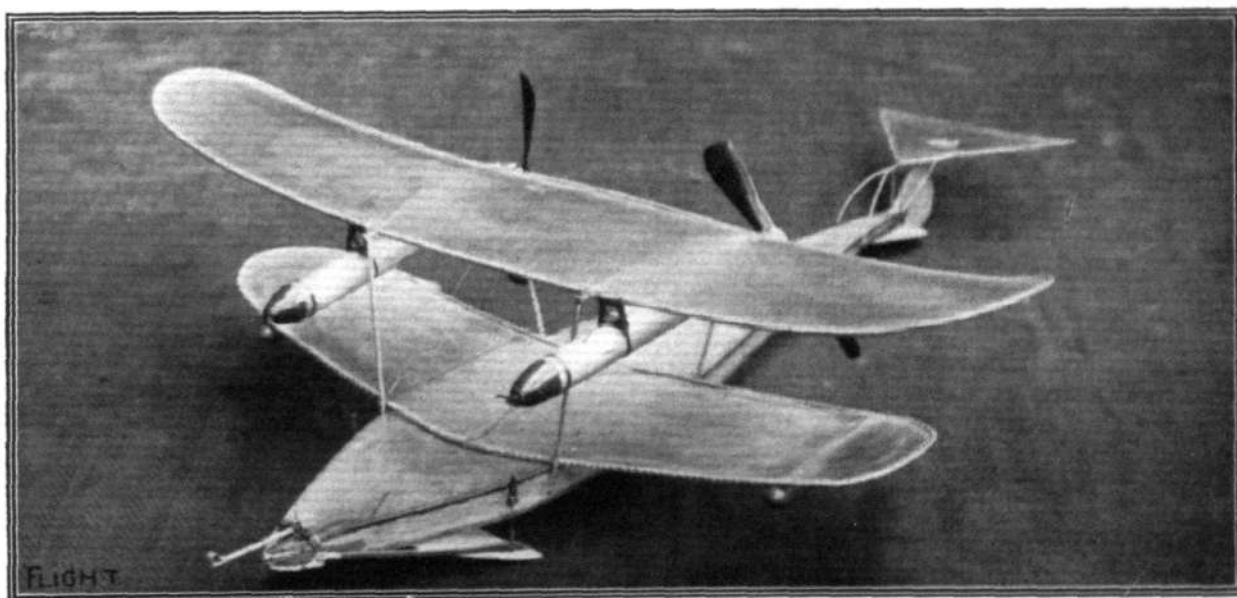
PROTECTOR AND COMBINED
SHOCK-ABSORBER AND
HYDROVANE.

As can be seen, the machine possesses much originality and many points of interest, and is absolutely unlike the usual type of model hydro-aeroplane. There is no doubt that the "air boat" type does possess certain advantages; in any case, it is the duty of aeromodelists to experiment with every type. From a model point of



ARRANGEMENT OF TAIL PLANES
AND REAR HYDROVANE.

view, we scarcely think that this type can compete successfully against the more usual type, but a competition arranged for this type alone would be certain to give some very interesting results. Perhaps some gentleman who chances to read these lines will kindly come forward and offer such a prize for competition. There are many, we know, who pin their faith in this particular type, and a model competition would afford an excellent opportunity of turning opinions into knowledge of a more substantial character.



The Fleming-Williams hydro-aeroplane (flying boat type) as exhibited at Olympia.

attended, and that a good number will come prepared to take part in the discussion. It will facilitate matters if those thinking of doing so would kindly send in their names to Mr. Akehurst. The opener of the discussion (who will almost entirely confine his remarks to the problems of launching and alighting) proposes to limit himself to a period of about 30 minutes, which it is hoped will leave ample time for a good discussion. His remarks will be illustrated by models,

Replies in Brief.

LIVERPOOL, A.—Glad to know the advice given was so useful. In reply to your query, before thinking of building a man-carrying glider, you should procure a copy of "How to Build a 20-ft. Biplane Glider," price 1s. 6d. published by E. and F. N. Spon. It contains much useful information, for a novice at any rate. A glider is totally unlike a model, and too much care and forethought cannot be used.

THE MONACO MEETING.

IN our last issue the account of the actual doings at Monaco covered up to the Monday's work. On Tuesday nothing was done till the afternoon, with the exception of a brief trial by Gaubert on the M. Farman. There was, however, a deal of activity in the afternoon, when Bregi on the Breguet, Gaubert (M. Farman), Weymann (Nieuport), Espanet (Nieuport), and Barra (Astra) each succeeded in carrying out one or more of the preliminary trials; Bregi, Gaubert, and Weymann made the altitude test; Gaubert and Espanet the *vol plané*, and Barra, the starting, towing and navigability tests. On Wednesday, Espanet, Weymann, and Bregi completed all the preliminary tests, while Moineau on the second Breguet did the starting up, towing and navigability, and hoisting tests. This latter item was also undergone by Bregi, Espanet, Weymann, and Gilbert (Morane). The next day Gaubert and Moineau both finished the tests, the former only having to do the hoisting test, while the Breguet had to do the altitude and *vol plané* trials. The Henry Farman and Prevost's Deperdussin had both been repaired in record time, and they finished off their qualifying trials in fine style, and swelled the number of those eligible to take part in Saturday's race to seven. Fischer, the H. Farman pilot, polished off all six tests in just under the hour. In the evening Garros, on his Morane, made a splendid flight of three times round the course at a very fast speed. During a trial run in the evening, Chemet's Borel was badly smashed, seemingly through the pilot trying to get into the air too quickly.

Friday was given up to the eliminating trials for the Schneider Cup, but as Prevost (Deperdussin), Garros (Morane) and Espanet (Nieuport) were the only competitors, they, of course, were selected as the French team. The trials were over two laps of the course, shown on the chart on page 433, and at each half of the lap the machine had to cover a distance of 500 metres in contact with the sea. As the only other entrant was Weymann (Nieuport), representing the U.S.A., the situation was a curious one. The times were:—

1. Prevost (Deperdussin), 31 mins. 28 secs. (first round in 13 mins. 35 secs.).
2. Garros (Morane-Saulnier), 40 mins. 40 secs. (first round in 21 mins. 30 secs.).
3. Espanet (Nieuport), 42 mins. 36 secs. (first round in 21 mins. 20 secs.).

Saturday was set apart for the Grand Prix de Monaco, and although a gale was blowing and there was a heavy swell on the sea, preparations were made for the start at 10 a.m. Fischer on the Henry Farman was the first to be sent away, and he was followed three minutes later by Gaubert on the Maurice Farman. Fischer made the trip down the course to Beaulieu in splendid style, but in alighting for the 500 metre run along the water the machine capsized, while Gaubert was also put *hors de combat* through float trouble. Weymann fared little better than Fischer, while Bregi decided to give up at Beaulieu. Moineau persevered and completed the skimming test at San Remo, only to get smashed in trying to get off the water again. Espanet and Prevost were unable to start, Espanet having his floats damaged in trying to get away, while the propeller of Prevost's machine was smashed by a wave. On Sunday and Monday no flying was possible on account of the rough state of the sea. Tuesday's work was marred by a fatality, Louis Gaudart being drowned in the early morning while testing the d'Artois machine. After skimming along the surface of the water for a little way the machine shot up into the air and then suddenly dived into the sea, carrying the pilot down with it, and his body had not been recovered up to the time of going to press. During the day a competition was held to take the place of the second half of the race which had to be abandoned on Saturday. There were four starters—Gaubert, Espanet, Bregi, and Prevost, and they were set to cover 50 laps of a 10-kilom. circuit. None of them completed the full course, Gaubert doing best by covering 270 kiloms., with a very long stop after the first 100 kiloms., his total time, including stop, being 7h. 40m. 12s. Bregi did 260 kiloms. in 3h. 33m. 59s., while Espanet gave up at 190 kiloms. Prevost retired after three rounds. Although no one completed the full distance, Gaubert was awarded first prize and Bregi the second.

The International race for the Schneider Cup was held on Tuesday morning. Prevost was the first away at five minutes past eight, and he was followed after 14 mins. by Garros, while Espanet started at 8.50 and Weymann at 9.14. Garros did not go very far, and Espanet gave up at the end of the first round. The race, therefore, resolved itself into a duel between France and the U.S.A., but Prevost, on his Deperdussin, alone completed the full course of six laps, a total distance of 300 kiloms. Weymann secured the lead on time in the fourth lap, but after completing it—at 200 kiloms.—he retired, leaving Prevost to win as he liked. He skimmed past the finishing line and had to re-fly part of the last lap at the request of the judges.

THE "SOUTH-EASTERN" TROPHY FOR MODELS.

WE publish below the rules for the first competition for the above trophy. These may prove useful to other model clubs as a basis for competitions during the coming season, which, from all we can hear, promises to be a very eventful one.

RULES.

Competition for April-June, 1913, quarter.

1. This competition for the "South-Eastern" Trophy shall be held quarterly and be open to members of the South-Eastern Model Aero Club only, and is for
2. Models capable of *rising from* and *alighting on* both land and water.
3. Models must be equipped with all the necessary rising and landing gear during *all* the tests.
- 3a. Models may be fitted with a "DISAPPEARING" landing chassis (or float attachment), at the option of the competitor, but the device must be thoroughly workmanlike.
4. Models must weigh not less than eight (8) ounces in complete flying order, and
5. Will be required to make *qualifying* flights of 15 secs. duration off land and water.
- 6a. Any number of attempts (time permitting) may be made for the qualifying tests *off land*, but only three (3) tries will be allowed on *one* of three (3) specified days in June, for the *official* tests.
- 6b. A similar number of trials will be allowed *off water*.
7. Models will be required to alight on the water at the termination of one *official* flight and remain in a proper attitude for a period of not less than 5 minutes. (This rule may be altered at the discretion of the judges, if weather conditions are unfavourable).
8. Models will be required to alight on land at the termination of one *official* flight, and remain in a proper attitude for a period of not less than 5 minutes. (This rule may be altered at the discretion of the judges, if weather conditions are unfavourable).
9. Competitors may change, repair or add to their motive power (elastic) as often as necessary.
10. The winner shall be the competitor who obtains the greatest number of points, which will be awarded as follows:—
Duration off water ... 40 points | Alighting on land ... 5 points
" " land ... 30 " | Stability and design 15 "
Alighting on water ... 10 "
11. Models of the "tractor" type (single or twin screws) will be given an allowance of 25 per cent. increase on their points in both the qualifying and official flights, and *single-propeller* models will be given an allowance of 20 per cent.
12. Models must be fitted with effective protectors.
13. Competitors must be responsible for damage done by or to their models.
14. The judging committee shall consist of three (3) non-competitors.
15. These rules may be amended or otherwise added to at the discretion of the judges.



Aeronautical Patents Published.

Applied for in 1911.

Published April 17th, 1913.

29,012. C. D. BURNLEY AND BRITISH AND COLONIAL AEROPLANE CO. Aeronautical apparatus.

Applied for in 1912.

Published April 24th, 1913.

16,240. FRIED. KRUPP AKT.-GES. Sight for airship-repelling guns.
25,078. A. DESAYE. Monoplane.

Applied for in 1913.

Published April 17th, 1913.

2,094. O. BRUNNER. Screw propeller for aeroplanes and airships.

FLIGHT.

44, ST. MARTIN'S LANE, LONDON, W.C.

Telegraphic address: Truditur, London. Telephone: 1828 Gerrard.

SUBSCRIPTION RATES.

FLIGHT will be forwarded, post free, at the following rates:—
UNITED KINGDOM. ABROAD.

	s.	d.		s.	d.
3 Months, Post Free ...	3	9	3 Months, Post Free ...	5	0
6 " " " ...	7	6	6 " " " ...	10	0
12 " " " ...	15	0	12 " " " ...	20	0

Cheques and Post Office Orders should be made payable to the Proprietors of FLIGHT, 44, St. Martin's Lane, W.C., and crossed London County and Westminster Bank, otherwise no responsibility will be accepted.